HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 100203850-1

**IN THE**
**UNITED STATES PATENT AND TRADEMARK OFFICE**

| | | | |
|---|---|---|---|
| **Inventor(s):** | **Doron SHAKED et al.** | **Confirmation No.:** | **5895** |
| **Application No.:** | **10/675,943** | **Examiner:** | **Sean T. MOTSINGER** |
| **Filing Date:** | **October 2, 2003** | **Group Art Unit:** | **2624** |

**Title: ROBUST RECURSIVE ENVELOPE OPERATORS FOR FAST RETINEX-TYPE PROCESSING**

**Mail Stop Appeal Brief-Patents**
**Commissioner For Patents**
**PO Box 1450**
**Alexandria, VA 22313-1450**

## TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on May 11, 2009.

☒ The fee for filing this Appeal Brief is $540.00 (37 CFR 41.20).

☐ No Additional Fee Required.

**(complete (a) or (b) as applicable)**

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

| | | | |
|---|---|---|---|
| ☐ 1st Month $130 | ☐ 2nd Month $490 | ☐ 3rd Month $1110 | ☐ 4th Month $1730 |

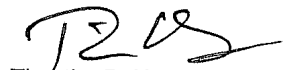
☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $ 540 . At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Respectfully submitted,

Doron SHAKED et al.

By: 

Timothy B. Kang

Attorney/Agent for Applicant(s)

Reg No. : 46,423

Date : July 10, 2009

Telephone : (703) 652-3817

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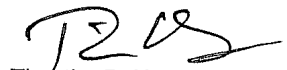
By: 

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**MAIL STOP APPEAL BRIEF - PATENTS**
Commissioner for Patents
P.O. Box 1450
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## APPEAL BRIEF - PATENTS

Sir:

This is an Appeal Brief in connection with the decisions of the Examiner in a Final Office Action mailed February 9, 2009, and in connection with the Notice of Appeal filed on May 11, 2009.

It is respectfully submitted that the present application has been more than twice rejected.

Each of the topics required in an Appeal Brief and a Table of Contents are presented herewith and labeled appropriately.

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## (1) Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, L.P.

## (2) Related Appeals and Interferences

The Appellant is unaware of any appeals or interferences related to this case.

## (3) Status of Claims

Claims 10-14 and 16-24 are allowed. Claims 2-7 and 9 are objected to as being dependent upon a rejected base claim, but are otherwise allowable.

Claims 8 and 15 have been canceled without prejudice or disclaimer of the subject matter contained therein.

Claim 1 stands rejected.

Pursuant to 37 C.F.R. § 41.37, the Appellant hereby appeals the Examiner's decision finally rejecting independent claim 1 to the Board of Patent Appeals and Interferences. Therefore, claim 1 of this application is at issue on this appeal.

## (4) Status of Amendments

No amendment was filed subsequent to the Final Office Action dated February 9, 2009.

A copy of the claim at issue on appeal is attached as the Claims Appendix.

## (5) Summary of Claimed Subject Matter

Claim 1 is the only claim at issue in this appeal. It should be understood that the citations below to the original disclosure as providing support for the claimed features are merely exemplary and do not limit the claim features to only those citations.

Independent claim 1 pertains to a computer program (10) for processing a color image (*Specification*, page 5, line 6), said computer program being embodied in a computer readable medium (*Specification*, page 8, lines 14-18, in which the computer readable medium is incorporated in the digital camera or other device capable of capturing or receiving an image), comprising:

code for receiving the color image (input processor 20, *Specification*, page 8, lines 23-25);

code for Retinex-type processing (local statistics algorithim 40, Specification, page 9, lines 5-9) comprising:

code for cascaded recursive filtering (recursive filter 44), wherein the code for cascaded recursive filtering comprises code for infinite impulse response (IIR) filtering (*Specification*, page 9, line 10-page 10, line 22), and

code for correcting pixels of the input color image according to corresponding pixel values in the local statistics processor (*Specification*, page 10, lines 16-22); and

code for transforming the corrected pixels into an output signal that is indexed to represent an intensity of a particular position in the color image (*Specification*, page 8, line 23-page 9, line 4).

## (6) Grounds of Rejection to be Reviewed on Appeal

A. Whether claim 1 was properly rejected under 35 U.S.C. §102(b) as being anticipated by Ogata et al. "Dynamic range compression based on illumination compensation" IEEE Trans. On Consumer Electronics Vol. 47, pp548-558, August 2001, (hereinafter "Ogata").

## (7) Arguments

### A. The rejection of claim 1 under 35 U.S.C. §102(b) as being anticipated by Ogata should be reversed

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

> Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

Independent claim 1 recites that the code for Retinex-type processing includes code for cascaded recursive filtering, which includes code for infinite impulse response (IIR) filtering. IIR filtering is a recursive operation applied pixel by pixel in a particular order (usually raster). One result of which is that IIR filtering results in different outputs when applied on an image and a flipped or rotated version of the image.

In setting forth the rejection of independent claim 1, the Examiner asserts that Ogata discloses code for retinex type processing including cascaded recursive filtering, which includes code for infinite impulse response filtering. *Final Office Action*, page 2, last three lines-page 3, line 2. This assertion, however, is inaccurate because the recursive operations discussed in Ogata relate to recursion between scales. More particularly, Ogata discloses that a description of an attenuation function M at some scale k is dependent on the result of the same attenuation function M in a previous scale (k-1) and of the output image at scale (k). As such, use of the recursive operations disclosed in Ogata on an image and a flipped version of that image will result in an output of the flipped or rotated version being a flipped or rotated version of the output of the image. Thus, the outputs of the image and the flipped or rotated version of the image will be similar to each other, which differs from the outputs of the image and the flipped or rotated version of the image when the IIR filtering of independent claim 1 is implemented.

Accordingly, contrary to the assertions made by the Examiner, Ogata fails to disclose that code for Retinex-type processing includes code for cascaded recursive filtering, in which the code for cascaded recursive filtering includes code for infinite impulse response (IIR) filtering as claimed in an independent claim 1.

For at least the foregoing reasons, the Examiner has failed to establish that Ogata discloses each and every element contained in independent claim 1 and has thus failed to establish that independent claim 1 is anticipated by the disclosure contained in Ogata. Accordingly, the Board is respectfully requested to reverse the rejection of independent claim 1.

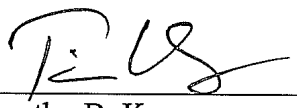
**(8) Conclusion**

For at least the reasons given above, the rejection of claim 1 described above should be reversed and this claim allowed.

Please grant any required extensions of time and charge any fees due in connection with this Appeal Brief to deposit account no. 08-2025.

Respectfully submitted,

Dated: July 10, 2009

By 

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## (9) Claim Appendix

1. (Previously Presented) A computer program for processing a color image, said computer program being embodied in a computer readable medium, comprising:

code for receiving the color image;

code for Retinex-type processing comprising:

code for cascaded recursive filtering, wherein the code for cascaded recursive filtering comprises code for infinite impulse response (IIR) filtering, and

code for correcting pixels of the input color image according to corresponding pixel values in the local statistics processor; and

code for transforming the corrected pixels into an output signal that is indexed to represent an intensity of a particular position in the color image.

## (10) Evidence Appendix

None.

## (11) Related Proceedings Appendix

None.